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Cooperative Economic Insect Report

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PLANT PROTECTION AND QUARANTINE PROGRAMS
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
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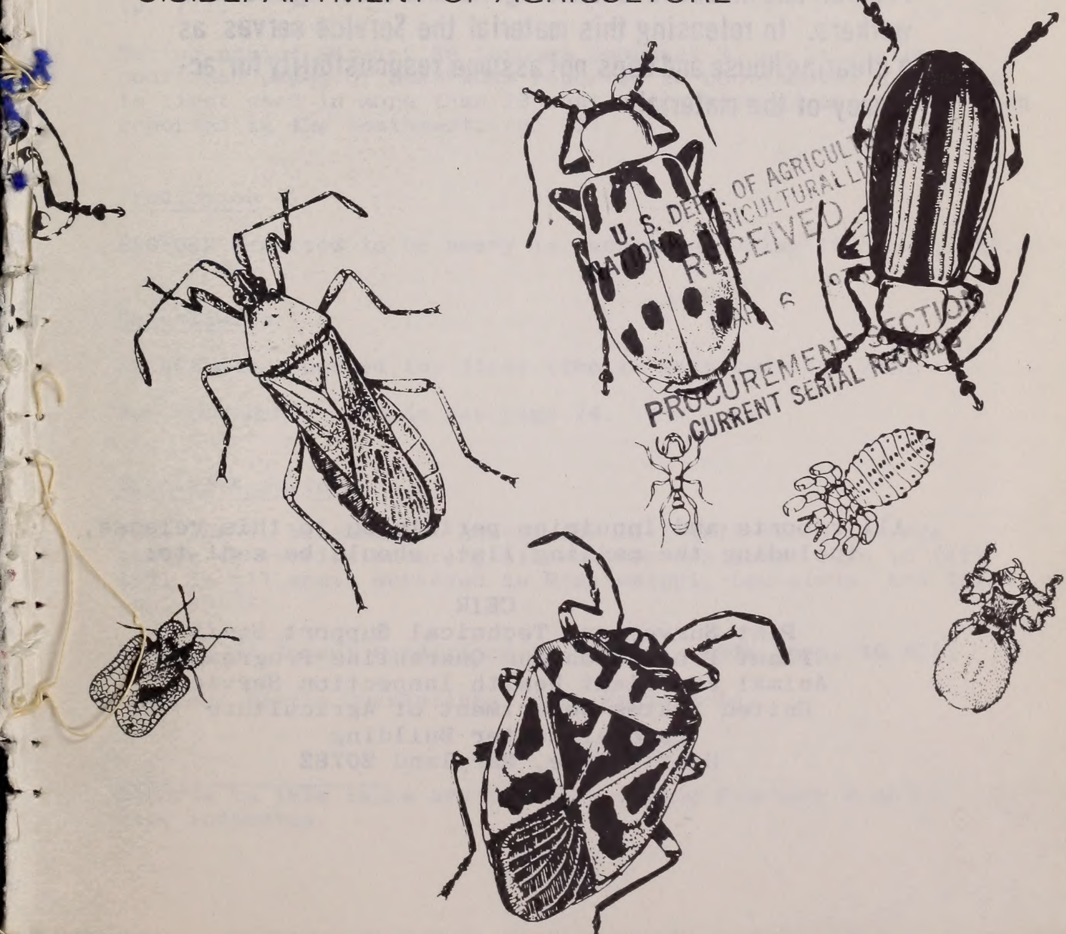

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The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Service serves as a clearing house and does not assume responsibility for accuracy of the material.

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Hyattsville, Maryland 20782

Volume 23 February 16, 1973 Number 7

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

GREENBUG active, but light, in small grains in Texas and Oklahoma. WINTER GRAIN MITE caused some damage to small grains in Texas, some controls applied. (p. 71).

ALFALFA WEEVIL active in Oklahoma, EGYPTIAN ALFALFA WEEVIL active in Arizona. (p. 71).

GREEN PEACH APHID building up on lettuce in Salt River Valley of Arizona. CABBAGE LOOPER egg laying increased in same area. (p. 71).

During period January 29 through February 3, no laboratory confirmed cases of SCREWWORM reported in continental U.S. This is first week in more than 12 months in which no cases have been reported in the Southwest. (p. 73).

Prediction

BAGWORM expected to be heavy in Tennessee during 1973. (p. 72).

Detection

An ADELGID reported for first time in Maryland. (p. 72).

For new county records see page 74.

Special Reports

BOLL WEEVIL hibernation survey for fall 1972 shows average number of weevils entering hibernation was lower than in fall 1971 in all areas surveyed in Mississippi, Louisiana, and Texas. (pp. 75-78).

Summary of Insect Conditions in Hawaii - 1972. (pp. 79-82).

Japanese Beetle Quarantines. Map. Centerfold.

Reports in this issue are for week ending February 9 unless otherwise indicated.

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Japanese Beetle Quarantines. Map. Centerfold.

NATIONAL WEATHER SERVICE'S 30-DAY OUTLOOK

MID-FEBRUARY TO MID-MARCH 1973

The National Weather Service's 30-day outlook for mid-February to mid-March is for temperatures to average below seasonal normals over the gulf coast region as well as the middle and south Atlantic Coast States. Above normal averages are indicated for the northern and central Plains, the northern Mississippi Valley, the Pacific coast, and the southern Plateau. Elsewhere near normal temperatures are in prospect. Precipitation is expected to exceed normal over the Atlantic Coast States, the east gulf coast region, and central and southern portions of both the West Coast States and the Plateau region. Subnormal totals are indicated for eastern portions of the northern and central Plains, the upper Mississippi Valley and the Rio Grande Valley. In unspecified areas near normal precipitation is expected.

Weather forecast given here is based on the official 30-day "Resume and Outlook" published twice a month by the National Weather Service. You can subscribe through the Superintendent of Documents, Washington, D.C. 20250. Price $5.00 a year.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

GREENBUG (Schizaphis graminum) - TEXAS - Ranged 2-10 per row foot in Wilbarger, Foard, Archer, and Wichita Counties. Increased, but still light, in some fields in Motley, Knox, Haskell, and Throckmorton Counties. (Boring). OKLAHOMA - Averaged 1 per 10 linear feet in scattered wheatfields in southern Cotton and Tillman Counties. (Okla. Coop. Sur.).

SMALL GRAINS

WINTER GRAIN MITE (Penthaleus major) - TEXAS - Light in Rolling Plains area. Populations in some Haskell County small grain fields ranged 5-100 per row foot with light to moderate leaf damage noted. Light in Knox, Throckmorton, Wilbarger, Foard, and Archer Counties; ranged 2-8 mites per drilled row foot. Scattered oat fields infested in north-central area near Denton County. Some controls applied before last rains; treatments ceased due to unfavorable weather. (Boring, Turney).

FORAGE LEGUMES

PEA APHID (Acyrthosiphon pisum) - NEW MEXICO - Ranged 2-6 per square foot on established alfalfa. Ranged 25-30 per square foot in new alfalfa field in Carlsbad, Eddy County. (N.M. Coop. Rpt.). ARIZONA - Counts per 100 sweeps of alfalfa averaged as follows: Yuma County - Dome Valley 2,600, Gila Valley 1,200, Yuma Valley 1,400, Roll Valley 300, Wellton Valley 300, Yuma Mesa 400; Maricopa County 500. (Ariz. Coop. Sur.).

BEET ARMYWORM (Spodoptera exigua) - ARIZONA - Counts per 100 sweeps of alfalfa in Yuma County averaged as follows: Dome Valley 25, Gila Valley 20, Yuma Valley 15, Roll Valley zero, Wellton Valley 35, Yuma Mesa 50. (Ariz. Coop. Sur.).

ALFALFA WEEVIL (Hypera postica) - OKLAHOMA - Egg counts per square foot by county: January 26 - Mayes 118; Nowata 154; Washington (3 fields) 171, 274, and 308; Osage 43. January 31 - Payne 43. February 2 - Stephens, ranged 22-239. Some active adults seen in Payne and Tulsa Counties February 3 and 4. (Okla. Coop. Sur.). MISSOURI - Fall egg counts averaged 44 per square foot in Perry County and 22 per square foot in Cape Girardeau County, in southeast area; ranged 11-35 per square foot in central area. (Huggans).

EGYPTIAN ALFALFA WEEVIL (Hypera brunneipennis) - ARIZONA - Counts per 100 sweeps of alfalfa in Yuma County averaged as follows: Dome Valley 20, Gila Valley 20, Yuma Valley 30, Roll Valley 30, Wellton Valley zero, Yuma Mesa 80. Eggs found in alfalfa stems in Salt River Valley, Maricopa County. (Ariz. Coop. Sur.).

GENERAL VEGETABLES

GREEN PEACH APHID (Myzus persicae) - ARIZONA - Building up on lettuce in Salt River Valley, Maricopa County. Some fields treated in Yuma County. (Ariz. Coop. Sur.).

CABBAGE LOOPER (Trichoplusia ni) - ARIZONA - Egg laying increased on lettuce in Salt River Valley of Maricopa County. Treatment of lettuce continued in Yuma County. (Ariz. Coop. Sur.).

DECIDUOUS FRUITS AND NUTS

PEAR PSYLLA (Psylla pyricola) - OREGON - Prespray counts ranged 6-8 per tap in Meford area pear orchards in Jackson County; indicates slightly heavier than usual overwintering population. Spraying began February 3, by midweek 1,000-1,500 acres treated. (Berry). Eggs developing in the Hood River area of Hood River County; no oviposition noted. Population levels normal. (Zwick).

ORNAMENTALS

BAGWORM (Thyridopteryx ephemeraeformis) - TENNESSEE - Random sampling for overwintering eggs in Davidson County showed heavy egg laying in fall 1972. Heavy population expected in 1973. Unusual finds of overwintering pupae noted during sampling. Only eggs of this pest previously known to overwinter. A male moth was reared from an overwintered pupa in Knox County April 1972. If pupae overwintered in State, spring mating may result, causing additional problems in future control of this pest. (Williams et al.).

A PSYLLID (Gyropsylla ilicis) - ALABAMA - Nymphs heavy in leaf galls and damaging Yaupon holly at Mobile Municipal Auditorium, Mobile County. Collected by F.J. Subirats and determined by L.M. Russell. This is first report from Mobile County since 1879. (Munson).

AN ADELGID (Adelges tsugae) - MARYLAND - Established infestation found on 25-foot ornamental hemlock near Sunderland, Calvert County. Aphids appeared to be all immatures. Specimens collected February 9, 1973, by W. Gaiser. Determined by L.M. Russell. This is a new State record. (U. Md., Ent. Dept.).

CAMELLIA SCALE (Lepidosaphes camelliae) - FLORIDA - All stages collected from Burford holly at Punta Gorda, Charlotte County, January 30, 1973, by G.P. Lamb. This is a new county record. (Fla. Coop. Sur.).

ARMORED SCALES - FLORIDA - All stages of Lepidosaphes maskelli collected from 10 of 100 juniper plants checked at Punta Gorda January 30, 1973. All stages of Carulaspis minima collected from arborvitae at nursery in Port Charlotte, January 20, 1973. All stages of Phenacaspis cockerelli light on 3 of 6 Magnolia grandifolora in nursery at Punta Gorda January 30, 1973. All collections by G.P. Lamb. These are 3 new county records for Charlotte County. (Fla. Coop. Sur.).

FOREST AND SHADE TREES

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - NORTH CAROLINA - Estimates for 1972 indicate loss of 25.6 thousand cords of pulp wood and 5.6 million board feet of saw timber. With stumpage value of 5 dollars per cord for pulp wood and 35 dollars per million board feet, represents loss of $324,000. Much of killed timber salvageable. (Hunt).

BLACK TURPENTINE BEETLE (Dendroctonus terebrans) - NORTH CAROLINA - Estimates for 1972 indicate loss of 2,200 trees valued at stumpage figure of five dollars per cord for pulp wood; an estimated $8,000 loss. Figure very conservative, since much loss occurred in urban areas. (Hunt).

DEODAR WEEVIL (*Pissodes nemorensis*) - MISSISSIPPI - Leader damage evident to 15-foot loblolly pines in Oktibbeha, Winston, and Noxubee Counties. Larvae active under bark. (Robinson).

NORTHERN PINE WEEVIL (*Pissodes approximatus*) - KENTUCKY - Heavy in Scotch pines in Fayette County. (Barnett).

EASTERN TENT CATERPILLAR (*Malacosoma americanum*) - FLORIDA - Eggs and first-instar larvae collected on wild plum and wild cherry at Gainesville, Alachua County, February 6 by L.A. Hetrick. First report of egg hatch for season. (Fla. Coop. Sur.).

MAN AND ANIMALS

SCREWWORM (*Cochliomyia hominivorax*) - During period January 29 through February 3, there were no laboratory confirmed cases reported in the continental U.S. This is the first week in over 12 months in which no cases have been reported in the Southwest. Total of 84 confirmed cases reported in Mexico. Number of sterile flies released in U.S. this period totaled 41,008,000, all in Texas. Total of 172,192,500 sterile flies released in Mexico. (Anim. Health).

COMMON CATTLE GRUB (*Hypoderma lineatum*) - OKLAHOMA - Numbers in backs of cattle at packing plants in Oklahoma County decreased sharply past 14 days. Indicates most larvae full grown and dropped from cattle to pupate. Grubs heavy in Pawnee County, moderate in Comanche County, light to moderate in Roger Mills County. (Okla. Coop. Sur.).

STABLE FLY (*Stomoxys calcitrans*) - OKLAHOMA - Some active adults seen in Payne County February 4. (Okla. Coop. Sur.).

MOSQUITOES - ARKANSAS - Adult *Anopheles* spp. and *Culex* spp. active on warm nights past 14 days in southeast area. (Boyer).

CATTLE LICE - OKLAHOMA - Lice, mainly *Haematopinus eurysternus* (shortnosed cattle louse), moderate to heavy on cattle in Nowata, Pawnee, Hughes, and Comanche Counties. Numbers increased rapidly in Comanche County. Light to moderate, but increasing, in Roger Mills County; light in Oklahoma County. (Okla. Coop. Sur.). TEXAS - *Linognathus vituli* (longnosed cattle louse) and *H. eurysternus* increased in north-central area near Denton and Dallas Counties. Treatments applied. (Turney).

A SCAB MITE (*Chorioptes bovis*) - OREGON - Found in 2 small cattle herds in Warren area, Columbia County. Treatment planned for the 21 calves found infested. (Henkel).

A HARDBACKED TICK (*Ixodes pacificus*) - CALIFORNIA - Unusually prevalent this season in most foothill areas in northern part of State. (Cal. Coop. Rpt.).

WINTER TICK (*Dermacentor albipictus*) - OKLAHOMA - Heavy on horses in McCurtain County. (Okla. Coop. Sur.).

EAR TICK (*Otobius megnini*) - OKLAHOMA - Moderate in ears of cattle in most areas of Roger Mills County. (Okla. Coop. Sur.).

BENEFICIAL INSECTS

AN ICHNEUMON WASP (*Bathyplectes curculionis*) - MISSOURI - This parasite of *Hypera postica* (alfalfa weevil) recovered from alfalfa field in Grundy County February 1, 1973, by J.L. Huggans. This is a new county record. (Munson).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

RED IMPORTED FIRE ANT (*Solenopsis invicta*) - GEORGIA - Thirty adult workers taken from mound in pasture at Cedartown, Polk County, during October 1972 by J. Stowe. Adults (25) taken in Echols County by K. Davenport November 2, 1972, at location of timber company in southwest Howell. Determined by V.H. Owens. Confirmed by D.R. Smith. These are new county records. (PP).

HAWAII INSECT REPORT

Sorghum - Larvae of a PYRALID MOTH (*Cryptoblabes pnidiella*) moderate on mature heads in experimental sorghum planting at Ewa, Oahu. (Kawamura).

General Vegetables - CARMINE SPIDER MITE (*Tetranychus cinnabarinus*) heavy on mature snap beans at Waianae, Oahu. GREENHOUSE WHITEFLY (*Trialeurodes vaporariorum*) and LEAFMINER FLIES (*Liriomyza* spp.) light on same crop. *Liriomyza* spp. larval mines moderate in tomato seedlings, adults moderate. Greenhouse whitefly trace in young sweet pepper plants. At Waimanalo, Oahu, greenhouse whitefly increased in several snap bean plantings; ranged moderate to heavy despite repeated control applications. (Kawamura).

Miscellaneous Pests - Total of 238 GIANT AFRICAN SNAIL (*Achatina fulica*) specimens collected during January at Poipu, Kauai; none at Wahiawa. Surveillance and baiting continued. Aerial snail bait drops planned at Kahaluu, Hawaii, in attempt to contain this pest. (Sugawa, Yoshioka).

DETECTION

New State Record - AN ADELGID (*Adelges tsugae*) MARYLAND - Calvert County. (p. 72).

New County Records - ARMORED SCALES - *Lepidosaphes*, *Carulaspis minima*, *Phenacaspis cockerelli* - FLORIDA - Charlotte (p. 72). CAMELLIA SCALE (*Lepidosaphes camelliae*) FLORIDA - Charlotte (p. 72). AN ICHNEUMON WASP (*Bathyplectes curculionis*) MISSOURI - Grundy (p. 74). RED IMPORTED FIRE ANT (*Solenopsis invicta*) GEORGIA - Polk, Echols (p. 74).

CORRECTIONS

CEIR 23(1-4):7 - Forest and Shade Trees - Last line should read: " ... levels past *2* months." (Kawamura).

CEIR 23(6):67 - Credit in lower right corner should read: 23(6):*63-67*, 1973.

Boll Weevil Hibernation Survey

Fall 1972

The fall collections of surface ground (woods) trash samples (two square yards per sample) were completed in three Southern States by State and Federal agencies to determine the number of boll weevil (Anthonomus grandis) adults that went into hibernation. Three samples were taken at each location in Mississippi, Louisiana, and Texas. In Mississippi, 45 samples were collected from 15 locations in each of 4 areas; each area was composed of 2 counties. Tate County replaced Monroe County in the Hill Section of Mississippi in 1970. Samples were collected at 45 locations in northeastern Louisiana: 20 locations in Madison Parish, 10 in Tensas Parish, and 5 each in East Carroll, West Carroll, and Richland Parishes. This is the fourth year trash samples have been collected in Richland Parish. In Texas, 75 samples were taken from 25 locations in 4 counties, with either 6 or 7 locations sampled in each county.

The average number of boll weevils entering hibernation in the fall of 1972 was lower than in the fall of 1971 in all areas surveyed in Mississippi as well as in northeastern Louisiana and central Texas.

Live boll weevils averaged 1,498 per acre of ground trash in Mississippi. This State average compares with 4,901 weevils per acre in 1971, 2,902 in 1970, 3,105 in 1969, 2,768 in 1968, and 6,304 in 1967. The previous low for the State was 2,091 weevils per acre in the fall of 1956, the year the present system of sampling for overwintering boll weevils was begun. Collections of wood trash in Mississippi were begun December 4 and completed December 13. Temperatures were high until late November. The first killing frost at Stoneville occurred November 23 when the temperature was 30 degrees. A total of 10.01 inches of rain was recorded at Stoneville during November. Most collections were made December 4, 5, and 6 and were reasonably dry. More rain prevented completion of collections until December 11 and 13. Part of Tate County and all but one location in Coahoma County were collected December 11 and 13 and were very wet.

In the five-parish area surveyed in northeast Louisiana, live boll weevils averaged 2,510 per acre. Average counts per acre by parish were: Madison 3,670; Tensas 2,098; East Carroll 806; West Carroll 1,775; and Richland 1,128. In Madison Parish, where these records have been maintained for the past 37 years and the average number of weevils entering hibernation is 3,898, there are 18 years when the number of weevils was higher than in the fall of 1972 and 18 years when the number was less than in 1972. Collections have been made for 17 years in Tensas Parish. In only two years has the number of weevils entering hibernation in the fall been less than the 2,098 weevils found in 1972. In East Carroll Parish where collections have been made for the past 16 years, the number of weevils entering hibernation has never been less than the 806 weevils found in fall 1972. Collections have been made in West Carroll Parish for the past five years. The average of 1,775 weevils found in 1972 compares with 8,551 weevils found per acre in 1971. Trash collections have been made in Richland

Parish for the past four years. The average of 7,905 weevils per acre in this parish compares with 1,128 weevils in the fall of 1972 and 6,292 weevils per acre in the fall of 1971.

Collections of woods trash were made in northeast Louisiana from December 4 through December 8. Temperatures remained high in the area throughout November. The first killing frost occurred December 1, when the temperature reached a low of 30 degrees. The average minimum temperature during the collection period was 42 degrees with a low of 30 degrees recorded December 7. The average maximum temperature was 64 degrees. Only 0.17 was recorded in the area during this period, but a total of 9.80 inches was recorded from October 9 through December 4.

Boll weevils averaged 743 per acre in Central Texas in the fall of 1972 compared with averages of 4,167 in 1971, 3,392 in 1970, 1,647 in 1969, 4,070 in 1968, and 4,942 in 1967. Fewer boll weevils entered hibernation in fall 1972 in Falls and McLennan Counties than in any year except 1963. In Limestone and Hill Counties, fewer weevils were found than in any of the previous 13 years. The area average was lower in fall 1972 than in any previous year except 1963. Favorable weather permitted an early harvest, stalk destruction, and farm cleanup. Collections of woods trash were made in Falls, Hill, Limestone, and McLennan Counties, Texas, between November 29 and December 19. The first killing frost occurred November 22. Cotton that had not been previously destroyed was killed by this freeze. (Pfrimmer, Cleveland et al., and C.B. Cowan).

See table and map on following pages.

1. Bulk soil.
2. Used mechanized soil-moving equipment.
   Used mechanized soil-moving equipment is exempt***
3. Any other products, articles, or means of conveyanc
   covered by the above, when it is determined by an in
   of spread of the Japanese beetle and the person in p
   fied.

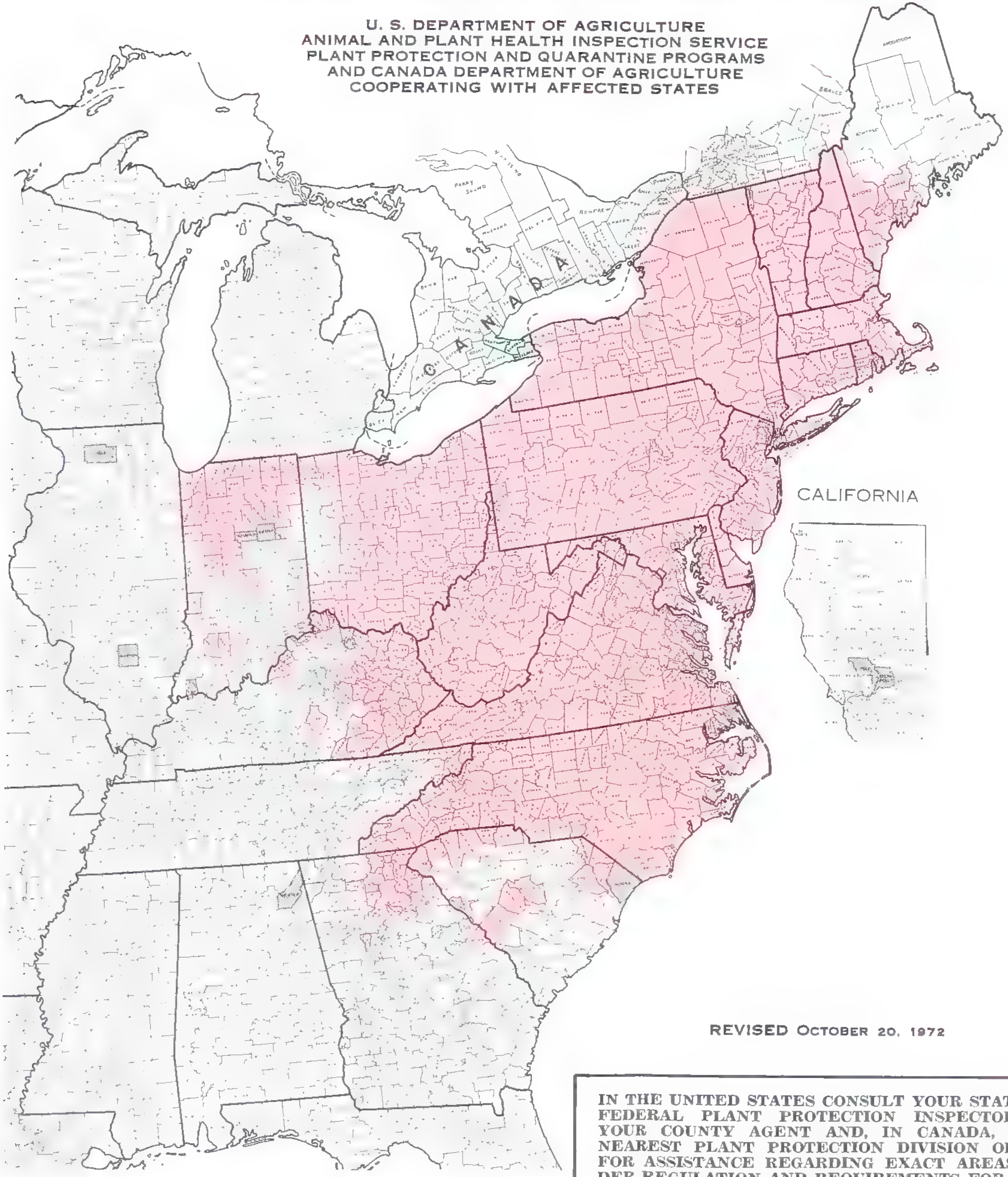
* See "Restrictions Imposed on Movement of Regulate

** Information as to approved laboratories may be obt

*** Exempt if not exposed to infestation after cleaning or

JAPANESE BEETLE QUARANTINES

U. S. DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE PROGRAMS
AND CANADA DEPARTMENT OF AGRICULTURE
COOPERATING WITH AFFECTED STATES



REVISED OCTOBER 20, 1972

IN THE UNITED STATES CONSULT YOUR STATE OR FEDERAL PLANT PROTECTION INSPECTOR OR YOUR COUNTY AGENT AND, IN CANADA, YOUR NEAREST PLANT PROTECTION DIVISION OFFICE FOR ASSISTANCE REGARDING EXACT AREAS UNDER REGULATION AND REQUIREMENTS FOR MOVING REGULATED ARTICLES.

COUNTIES ENTIRELY COLORED ARE COMPLETELY REGULATED;
COUNTIES WITH COLORED DOT ARE PARTIALLY REGULATED.

🟥 GENERALLY INFESTED AREA-STATE AND FEDERAL REGULATIONS.
(ERADICATION TREATMENTS NOT IN PROGRESS OR PLANNED.)

🟩 SUPPRESSIVE AREA-STATE, FEDERAL, AND CANADIAN REGULATIONS.

RESTRICTIONS ARE IMPOSED ON THE MOVEMENT OF REGULATED ARTICLES FROM A REGULATED AREA AS FOLLOWS:

1. RED INTO OR THROUGH GREEN, BLUE, OR WHITE.
2. GREEN INTO OR THROUGH BLUE OR WHITE.
3. GREEN INTO GREEN.
4. GREEN WITHIN GREEN*.
5. BLUE INTO ANY OTHER AREA**.

*WHEN IT IS DETERMINED BY THE INSPECTOR THAT A HAZARD

THE FOLLOWING REGULATED ARTICLES MOVED ED AREAS (RED) REQUIRE A CERTIFICATE OR PE AS INDICATED:*

1. Soil, compost, decomposed manure, humus, muck, ar things.

   Soil samples shipped to approved laboratories do not or permit.**

   Compost, decomposed manure, humus, and peat are pulverized, or compressed.
2. Plants with roots, **except** soil-free aquatic plants, mos ground-pine or running pine).
3. Grass sod.
4. Plant crowns and roots for propagation.
5. True bulbs, corms, rhizomes, and tubers of ornamental uncured.

   True bulbs, corms, rhizomes, and tubers (other than mental plants are exempt*** if free of soil.
6. Used mechanized soil-moving equipment.

   Used mechanized soil-moving equipment is exempt*
7. Any other products, articles, or means of conveyance covered by the above, when it is determined by an in of spread of the Japanese beetle and the person in notified.

THE FOLLOWING REGULATED ARTICLES M (GREEN) AND STATE REGULATED (BLUE) AREAS PERMIT YEAR-ROUND EXCEPT AS INDICATED:*

BOLL WEEVIL HIBERNATION SURVEY - FALL 1972

Area (State and County)	Number of Weevils per Acre	
	1971	1972
MISSISSIPPI		
South Delta (Sharkey and Yazoo Counties (area 1)).	2,970	486
Central Delta (Washington and Leflore Counties (area 2)).	1,296	54
North Delta (Coahoma and Panola Counties (area 3)).	6,534	2,700
Hill Section (Holmes and Tate Counties (area 4)).	8,802	2,754
LOUISIANA		
Northeastern (Madison, Tensas, East Carroll, West Carroll, and Richland Parishes).	6,131	2,510
TEXAS		
Central (Falls, Hill, Limestone, and McLennan Counties).	4,167	743

THE FOLLOWING REGULATED ARTICLES MOVED FROM GENERALLY INFESTED AREAS (RED) REQUIRE A CERTIFICATE OR PERMIT YEAR-ROUND EXCEPT AS INDICATED:[*]

1. Soil, compost, decomposed manure, humus, muck, and peat, separately or with other things.

   Soil samples shipped to approved laboratories do not require attachment of certificate or permit.[**]

   Compost, decomposed manure, humus, and peat are exempt[***] if dehydrated, ground, pulverized, or compressed.
2. Plants with roots, except soil-free aquatic plants, moss, and Lycopodium (clubmoss or ground-pine or running pine).
3. Grass sod.
4. Plant crowns and roots for propagation.
5. True bulbs, corms, rhizomes, and tubers of ornamental plants when freshly harvested or uncured.

   True bulbs, corms, rhizomes, and tubers (other than clumps of dahlia tubers) of ornamental plants are exempt[***] if free of soil.
6. Used mechanized soil-moving equipment.

   Used mechanized soil-moving equipment is exempt[***] if cleaned and repainted.
7. Any other products, articles, or means of conveyance of any character whatsoever, not covered by the above, when it is determined by an inspector that they present a hazard of spread of the Japanese beetle and the person in possession thereof has been so notified.

THE FOLLOWING REGULATED ARTICLES MOVED FROM SUPPRESSIVE (GREEN) AND STATE REGULATED (BLUE) AREAS REQUIRE A CERTIFICATE OR PERMIT YEAR-ROUND EXCEPT AS INDICATED:[*]

1. Bulk soil.
2. Used mechanized soil-moving equipment.

   Used mechanized soil-moving equipment is exempt[***] if cleaned and repainted.
3. Any other products, articles, or means of conveyance of any character whatsoever, not covered by the above, when it is determined by an inspector that they present a hazard of spread of the Japanese beetle and the person in possession thereof has been so notified.

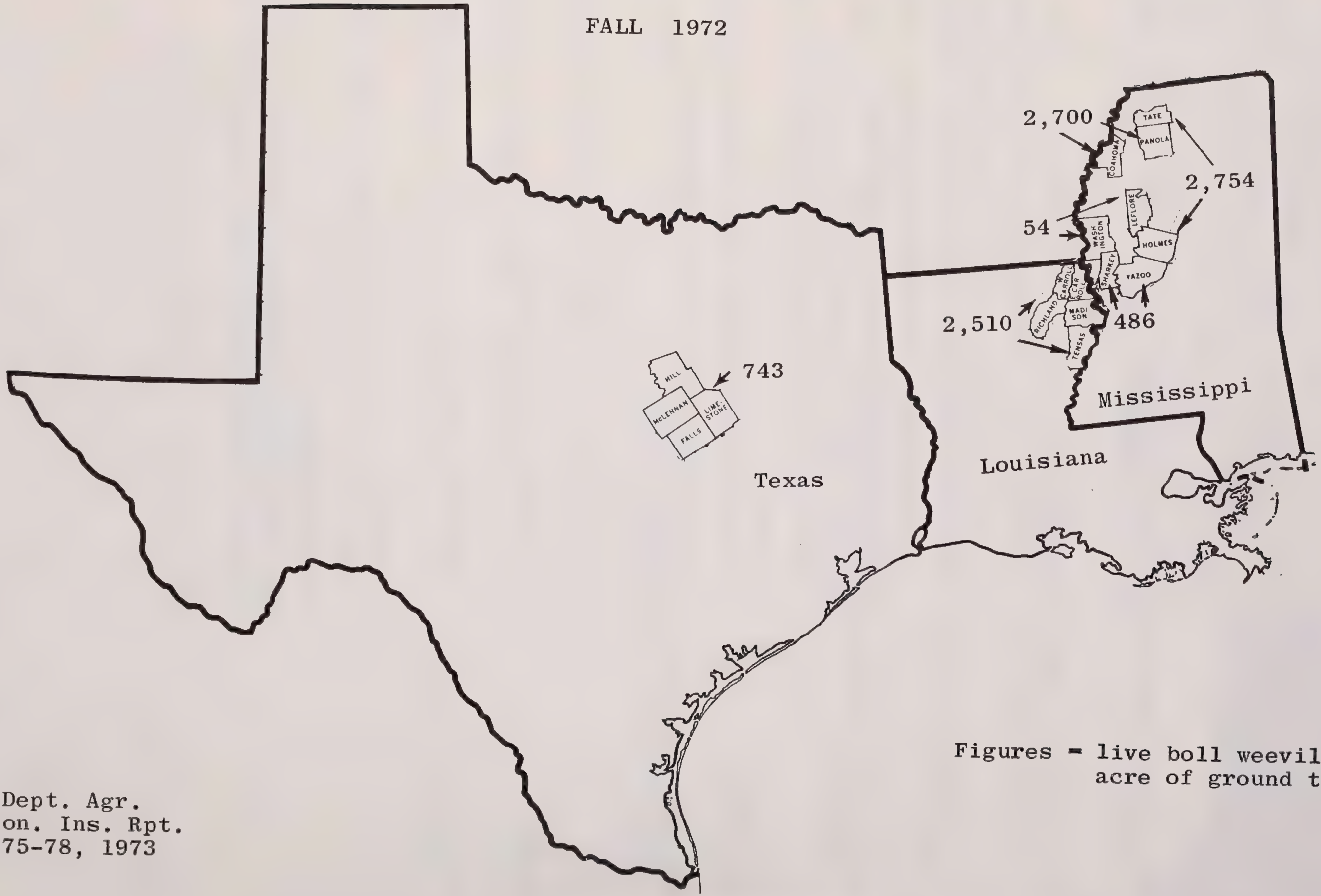
[*] See "Restrictions Imposed on Movement of Regulated Articles" on the reverse side.

[**] Information as to approved laboratories may be obtained from an inspector.

[***] Exempt if not exposed to infestation after cleaning or other prescribed handling.

BOLL WEEVIL HIBERNATION SURVEY

FALL 1972



Figures = live boll weevils per
acre of ground trash

U.S. Dept. Agr.
Coop. Econ. Ins. Rpt.
23(7):75-78, 1973

SUMMARY OF INSECT CONDITIONS IN HAWAII - 1972

Detection

Four species were reported as new to the United States. These were an ELATERID (*Cardiophorus stolatus*) on Oahu, a MESOSTIGMATID MITE (*Hypoaspis nidicorva*) on Hawaii, a PENTATOMID BUG (*Eysarcoris ventralis*) on Oahu, and a REDUVIID BUG (*Ectomocoris biguttulus*) on Oahu.

DAYLILY THRIPS (*Frankliniella hemerocallis*) nymphs and adults were originally collected from *Hemerocallis* spp. at Honolulu, Oahu, in September 1969 by K. Sakimura. This thrips is primarily a leaf feeder, but also feeds under stipules and bracts on flower stalks. Its origin is believed to be Eurasian and is known to occur in Japan. Since 1948 it has been collected in Wisconsin, Florida, Maryland, and New York. Determined by K. Sakimura. This is a new State record.

Other species recorded for the first time in Hawaii during 1972 were two CICADELLIDS (*Carniocephala sagittifera* and *Graphocephala cythura*) and a CERATOPOGONID MIDGE (*Forcipomyia fusicornis*), all collected on Hawaii Island.

Corn

CORN LEAF APHID (*Rhopalosiphum maidis*) nymphs and adults were light in sweet and field corn plantings on Oahu during most of the year, and in 350 acres of corn and sorghum at Kilauea, Kauai, during June. Parasitism by *Lysiphlebius testaceipes* (a braconid wasp) and *Aphelinus maidis* (an aphelinid wasp) ranged 5-20 percent in all host situations.

Turf, Pasutre, Rangeland

GRASS WEBWORM (*Herpetogramma licarsisalis*) larval activity was heavy during June and October in the Hana and Kipahulu areas on Maui, otherwise activity in the State remained generally trace and negligible in pastures, fairways, and other host situations.

General Vegetables

BLACK CUTWORM (*Agrotis ipsilon*) larvae were heavy in lettuce beds at Hawaii Kai, Oahu, and in bulb onion plantings at Palaau, Molokai, during summer months. Subsequent incorporation of granular preplant insecticides in these fields apparently alleviated the problem. SWEETPOTATO LEAFMINER (*Bedellia orchilella*) larval mining was heavy in sweetpotato fields at Hoolehua, Molokai, during spring. Activity on Oahu was generally trace to light. Biological control by *Apanteles bedelliae* (a braconid wasp), introduced from Kansas in 1945 and 1947, is probably the major factor. TOMATO PINWORM (*Keiferia lycopersicella*) caused heavy losses for the second consecutive year in tomato fields on Maui. It was first reported on this island in February 1971 and continued to be a problem despite intensive chemical control. Heavy larval incidences were also reported at Pearl City, Oahu, and Wailua, Kauai.

BEAN FLY (Melanagromyza phaseoli) on Oahu, where approximately 50 percent of the snap bean crop in the State is produced, was generally light in commercial plantings of this crop, soybeans and yardlong beans. Several reports of heavy infestations of snap bean and longbean yard plantings on Kauai and Maui were received, but in general were effectively controlled by Opius spp. (braconid wasps) and Halticoptera patellana (a pteromalid wasp). BEET ARMYWORM (Spodoptera exigua) infestations in green onions on Oahu varied from light to heavy and, combined with leafminer damage, caused extensive losses. CARMINE SPIDER MITE (Tetranychus cinnabarinus) was moderate to heavy in eggplant fields on Oahu, especially during summer months. Snap bean plantings were generally not as heavily infested as in previous years. ONION THRIPS (Thrips tabaci) increased in fields of green and bulb onions on Molokai and Maui. Numbers had been generally light throughout the State in previous years.

Fruits and Nuts

CLOUDYWINGED WHITEFLY (Dialeurodes citrifolii) was collected from citrus foliage at Nawiliwili, Kauai, in December 1971, for a new island record. D. citrifolii was first reported in the State in 1966, and also occurs on Oahu and Hawaii. At Kahuku, Oahu, about 1,000 coconut trees damaged by heavy larval infestations of COCONUT LEAFROLLER (Hedylepta blackburni) during spring remained shoddy for the remainder of the year. Parasites were noticeably absent throughout periods of heavy populations. Heavy activity during June caused the same effect on 200+ trees at Kahe Point, Oahu, but these trees appear to be recovering. Larval activity on Kauai and Maui was generally light compared to 1971. First reports of adult CITRUS SWALLOWTAIL (Papilio xuthus) sightings began in early February following 3 months of purported diapause. Larval activity and adult sightings increased steadily and peaked in late summer and early fall. By early November, marked inactivity indicated that this pest may have again gone into diapause. An adult specimen was taken in June from a lime tree at Poipu, Kauai, for a new island record, and by early fall had disseminated over most of the island.

Forest and Shade Trees

Infestation of a CONIFER APHID (Cinara carolina) was heavy in 20 acres of Pinus taeda at Olinda, Maui, during March and light on 1.5 acres of this host during June. Larvae of a NOCTUID MOTH (Melipotis indomita) ranged light to heavy under loose bark and debris of kiawe and monkeypod trees. Light trap collections on Oahu indicated sharp peaks in adult populations during March, June, and October.

General Pests

CHINESE ROSE BEETLE (Adoretus sinicus) heavily damaged foliage of 30 roadside Erythrina sp. trees at Hana, Maui, during summer and caused moderate damage to Terminalia catappa saplings at Maunalei, Lanai, during early fall. Only isolated, moderate to heavy damage to sweet corn, broccoli, and edible ginger plantings on Oahu occurred during the year. COCONUT SCALE (Aspidiotus destructor) infestations on coconut trees throughout Oahu ranged light to moderate, with colonies confined mostly to older fronds.

Colonies remained light and spotty on commercial plantings of papaya and banana. Nymphs and adults of *Lindorus lophanthae* and *Telsimia nitida* (lady beetles) occurred in most host situations, contributing directly to the limited activity of *A. destructor*. *Pseudoscymnus anomolus* (a lady beetle) purposely introduced from Guam in February 1970 to aid in the control of coconut scale, was recovered at Hawaii Kai during September. Light to heavy feeding by larvae of a NOCTUID MOTH (*Chrysodeixis chalcites*) during summer affected the marketability of ti leaves (*Cordyline terminalis*) at several areas on Hawaii. Damage was 40 percent in a 1.5-acre planting.

CORN EARWORM (*Heliothis zea*) larvae ranged light to severe in corn fields throughout Oahu, with increased incidence of heavy infestation in mature ears. Sporadic infestation and damage of buds in a commercial rose garden at Waianae, Oahu, an experimental plot of snap dragons at Kula, Maui, and occasional light infestation of tomato and sweet pepper fruits occurred during the year. GREENHOUSE THRIPS (*Heliothrips haemorrhoidalis*) was heavy in the Laupahoehoe Forest Reserve, Hawaii, during October, resulting in heavy foliar damage to *Acacia koa* saplings. Nymphs and adults were moderate in 200 acres of passion fruit at Kahalui, Maui, during this period. Infestations ranged light to heavy on *Pinus* sp. at Kula, Maui, and Kamuela, Hawaii, during the year. SOUTHERN GREEN STINK BUG (*Nezara viridula*) was light in most vegetable fields and fruit orchards on all islands. About 60-70 percent of all adults noted under field conditions bore eggs of *Trichopoda pennipes pilipes* (a tachina fly). Several lots of macadamia nuts for processing in the Kohala area of Hawaii during February were 21 percent damaged. A GEOMETRID MOTH (*Semiothisa santaremaria*) has replaced another GEOMETRID MOTH (*Anacamptodes fragilaria*) as the primary foliar pest of koa haole in the State. A very heavy buildup of both species occurred during October in koa haole and kiawe thickets at Kaena Point, Oahu. A total of 4,500 *S. santaremaria* and 250 *A. fragilaria* moths were taken in a single light trap during a 12-hour period.

Man and Animals

MOSQUITO collections from 58 light traps on Oahu from December 1971 throughout October 1972 averaged 5.8 *Aedes vexans nocturnus* per trap and 51.3 *Culex pipiens quinquefasciatus* per trap per month. The highest monthly average occurred during April.

Beneficial Insects

Larvae and adults of a LADY BEETLE (*Chilocorus nigritus*) were recovered for the first time in Hawaii feeding on various species of scales infesting bamboo at the University of Hawaii campus on Oahu. *C. nigritus* was introduced from Ceylon in October 1958 and from Guam in August 1971 to aid in the control of *Aspidiotus* spp. Increased activity by LANTANA CERAMBYCID (*Plagiohammus spinipennis*) was especially evident at Panaewa Forest, Hawaii, and at Ulupalakua, Maui, where releases were made during spring. Near complete defoliation of lantana by heavy larval populations of LANTANA DEFOLIATOR CATERPILLAR (*Hypena strigata*) in 1,000+ acres of pastureland at Ulupalakua and Auwahi, Maui, was reported in late spring. BRACONID WASPS (*Opius phaseoli* and *O. importatus*) heavily parasitized *Melanagromyza phaseoli* (bean fly) infesting leguminous plants on Maui and Kauai. Parasitism averaged 93 percent on Kauai. Heavy galling of Maui pamakani shrubs by a GALL FLY (Procecidochares utilis) was noted at Haleakala and Ulupalakua, Maui, and at Mt. Kaala, Oahu, during the fall. P. utilis was purposly introduced from Mexico in 1945 and continues to exert year-round stress on this weed pest.

Miscellaneous Pests

GIANT AFRICAN SNAIL (Achatina fulica) activity at Poipu, Kauai, decreased considerably. An average of 103 snails was destroyed during winter months, the usual period of peak snail activity. The 1970 average for these months was 460. At Wahiawa, a single snail was collected during December 1971 after six months of negative activity. Ten more snails were collected at this locale during January and February 1972, followed by negative activity for the remainder of the year. Snail activity on Hawaii Island remained extremely light; baiting and surveillance, however, continued here and on Kauai throughout most of the year. On Molokai, two snails were collected at Maunaloa in September, the first report of activity in this area in several years. On Lanai, a single 3.5-inch specimen was taken at Maunalei Gulch but subsequent surveys revealed no evidence of snail activity. A. fulica is presently established on every major island except Lanai. Several adults on an ICHNEUMON WASP (Pachysomoides stupidus) emerged from a nest of Polistes exclamans exclamans (a vespid wasp) collected at Honolulu in June, establishing its parasitic host relationship in Hawaii. A single adult was taken at large in koa haole thickets at Poipu, Kauai, during February, for a new island record.

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